

STATE OF NORTH CAROLINA FIRM PANEL LOCATOR DIAGRAM



DATUM INFORMATION

The **projection** used in the preparation of this map was the North Carolina State Plane (NAD83/ZONE 3200). The **horizontal datum** was the North American Datum of 1983 (NAD83) ellipsoid. Differences in datum, ellipsoid, projection, or Universal Transverse Mercator zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdictional boundaries. These differences do not affect the accuracy of this FIRM. All coordinates on this map are in U.S. Survey Feet, where 1 U.S. Survey Foot = 1200/3937 Meters.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. An average offset between NAVD 88 and the National Geodetic Vertical Datum of 1929 (NGVD 29) has been computed for each North Carolina county. This offset was then applied to the NGVD 29 flood elevations that were not revised during the creation of this statewide format FIRM. The offsets for each county shown on this FIRM panel are shown in the vertical datum offset table below. Where a county boundary and a flooding source with unrevised NGVD 29 flood elevations are coincident, an individual offset has been calculated and applied during the creation of this statewide format FIRM. See Section 6.1 of the accompanying Flood Insurance Study report to obtain further information on the conversion of elevations between NAVD 88 and NGVD 29. To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the North Carolina Geodetic Survey at the address shown below. You may also contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at www.ngs.noaa.gov.

North Carolina Geodetic Survey 121 West Jones Street Raleigh, NC 27601 (919) 733-3636 www.ncgs.state.nc.us	County Average Vertical Datum Offset Table County: Durham Vertical Datum Offset (ft): -0.83
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Example: NAVD 88 = NGVD 29 + (-0.83)

All streams listed in the **Flood Hazard Data Table** below were studied by detailed methods using field survey. Other flood hazard data shown on this map may have been derived using either a coastal analysis or limited detailed riverine analysis. More information on the flooding sources studied by these analyses is contained in the Flood Insurance Study report.

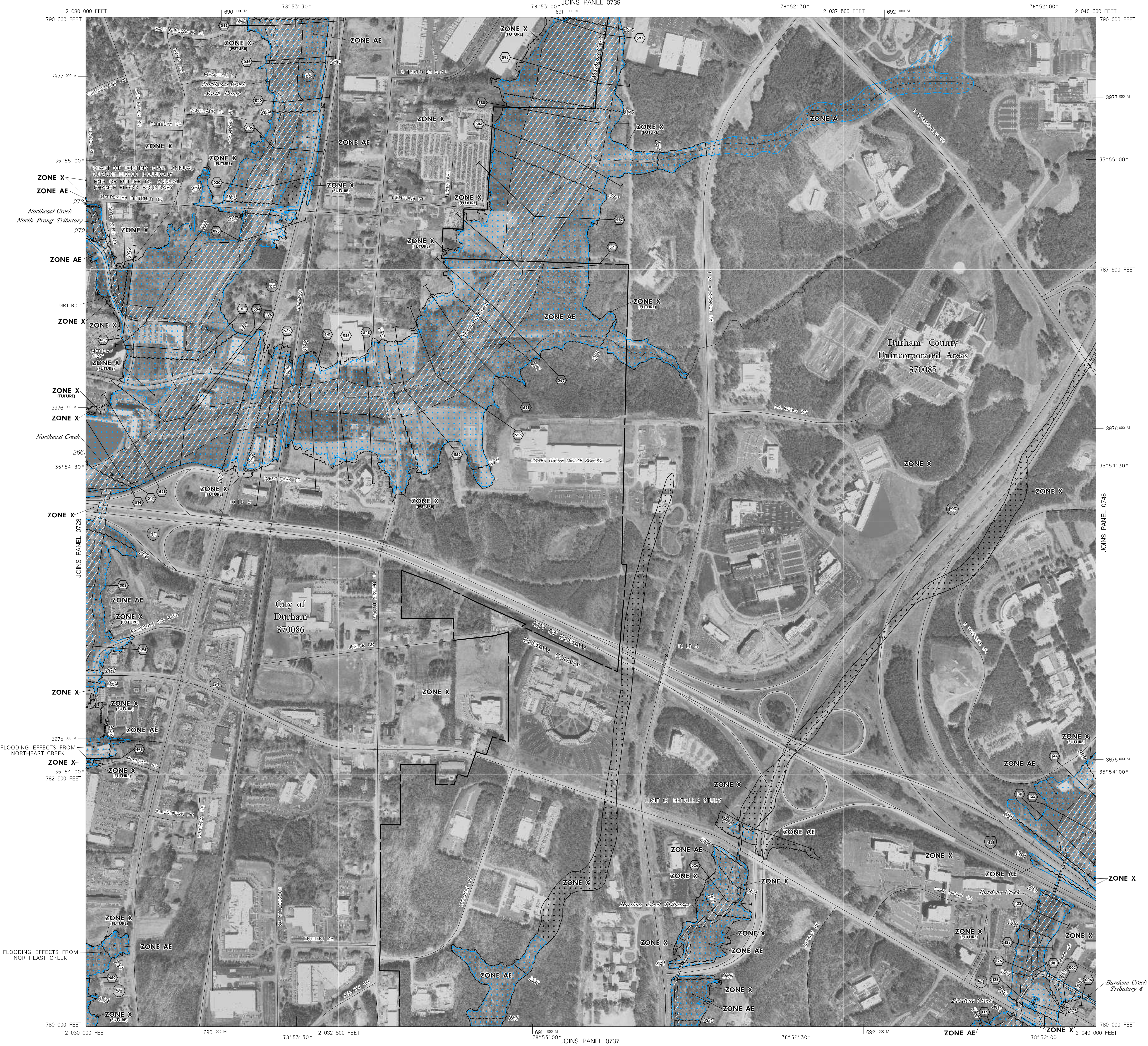
FLOOD HAZARD DATA TABLE				% Annual Chance (1% Inundation)	Floodway Width (feet)
Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Future Conditions Water-Surface Elevation (feet) MGS 88	1% Annual Chance Future Conditions Water-Surface Elevation (feet) NGVD 88	Left-Hand Distance from the Center of Station to Encroachment Boundary Location (feet) and Total Width (feet)
BURDENS CREEK					
117	11,759	1,960	270.2	270.4	40 / 180
123	12,285	1,960	276.1	276.2	32 / 15
126	12,566	1,170	277.6	278.0	56 / 70
128	12,814	1,170	277.9	278.3	47 / 60
132	13,180	1,170	278.2	278.5	145 / 116
141	14,052	1,170	286.7	289.0	312 / 197
144	14,370	1,170	286.7	289.0	183 / 318
147	14,748	1,170	286.7	289.0	175 / 124
BURDENS CREEK TRIBUTARY 4					
001	14	1,150	277.8	275.7	21 / 23
003	341	1,150	279.0	279.3	21 / 23
006	560	1,150	279.2	279.5	21 / 23
BURDENS CREEK TRIBUTARY					
026	2,595	NA	271.3	NA	130
NORTHEAST CREEK					
476	47,551	5,720	257.0	257.8	600 / 200
496	49,615	5,720	262.3	262.8	300 / 660
502	50,188	5,720	262.5	262.9	375 / 330
514	51,376	5,710	265.5	267.1	40 / 39
517	51,695	5,710	265.4	268.1	120 / 225
521	52,109	5,710	266.6	268.2	110 / 240
526	52,622	3,710	266.9	268.4	285 / 290
535	53,545	3,710	266.5	268.6	230 / 170
541	54,095	3,710	276.4	277.4	220 / 11
545	54,463	3,710	276.4	277.5	240 / 100
548	54,840	3,710	276.4	277.6	180 / 100
552	55,221	3,710	276.4	277.5	280 / 75
556	55,599	4,010	276.4	277.5	260 / 130
561	56,076	4,010	276.5	277.6	275 / 185
566	56,564	4,010	276.5	277.6	300 / 200
571	57,057	4,010	276.5	277.7	200 / 270
577	57,683	4,010	276.6	277.8	335 / 360
584	58,284	4,050	276.6	277.9	235 / 600
588	58,818	4,050	276.7	278.0	120 / 685
592	59,228	4,050	276.8	278.1	185 / 600
597	59,724	4,050	276.9	278.3	155 / 460
NORTHEAST CREEK NORTH PRONG					
004	390	2,760	266.7	260.7	250 / 90
013	1,271	2,760	266.7	265.8	220 / 160
025	2,488	2,610	266.7	266.5	250 / 19
030	3,034	2,610	268.2	268.5	200 / 110
035	3,464	2,610	268.4	269.0	160 / 58
040	3,955	2,610	269.1	269.9	195 / 40
045	4,480	2,610	270.0	270.8	275 / 20
049	4,897	2,610	270.5	271.4	280 / 95
NORTHEAST CREEK NORTH PRONGS TRIBUTARY					
009	913	NA	266.7	NA	120

* Floodway Width = 1/2 station includes both sides of North-East Creek

¹ Elevation Includes Mean High Water of Northeast Creek

* Fast flow mode ** Elevation includes backwater effects from Burdens Creek

Elevation includes backwater effects from Northeast Creek



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **Floodways** have been determined, users are encouraged to consult the Flood Profiles, Floodway Data, Limited Detailed Flood Hazard Data, and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of **regulatory floodways** shown on the FIRM for flooding sources studied by detailed methods were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data for flooding sources studied by detailed methods as well as **non-encroachment widths** for flooding sources studied by limited detailed methods are provided in the FIS report for this jurisdiction. The FIS report also provides instructions for determining a floodway using non-encroachment widths for flooding sources studied by limited detailed methods.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 4.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

Base map information and geospatial data used to develop this FIRM were obtained from various organizations, including the participating local community(ies), state and federal agencies, and/or other sources. The primary base for this FIRM is aerial imagery acquired by Durham County. The time period of collection for the imagery is 1989. Information and geospatial data supplied by the local community(ies) that met FEMA base map specifications were considered the preferred source for development of the base map. See geospatial metadata for the associated digital FIRM for additional information about base map preparation.

Base map features shown on this map, such as **corporate limits**, are based on the most up-to-date data available at the time of publication. **Changes in the corporate limits may have occurred since this map was published.** Map users should consult the appropriate community official or website to verify current conditions of jurisdictional boundaries and base map features. This map may contain records that were not considered in the hydraulic analysis of streams where no new hydraulic model was created during the production of this statewide format FIRM.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at www.fema.gov.

An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) revising portions of this panel, and digital versions of this FIRM may be available. Visit the **North Carolina Floodplain Mapping Program** website at www.ncfloodmaps.com, or contact the **FEMA Map Service Center** at 1-800-358-9616 for information on all related products associated with this FIRM. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at www.msc.fema.gov.

MAP REPOSITORY
Refer to Listing of Map Repositories on Map Index or visit www.ncfloodmaps.com.

EFFECTIVE DATE OF FLOOD INSURANCE RATE MAP PANEL
MAY 2, 2006

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to statewide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent, the North Carolina Division of Emergency Management or the National Flood Insurance Program at the following phone numbers or websites:

NC Division of Emergency Management
(919) 715-8000
www.ncemergencycontrol.org/nfip

National Flood Insurance Program
1-800-638-6620
www.fema.gov/nfip

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equalled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A
No Base Flood Elevations determined.
ZONE AE
Base Flood Elevations determined.
ZONE AH
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99
Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE VE
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream, plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X
Areas of 0.2% annual chance flood; areas of future conditions 1% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X
Areas determined to be outside the 0.2% annual chance and future conditions 1% annual chance floodplain.
ZONE D
Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary and future conditions 1% annual chance floodplain boundary
Floodway boundary
Zone D Boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988
Cross section line
Transect line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
1000-meter Universal Transverse Mercator grid ticks; zone 17
2500-foot grid values; North Carolina State Plane coordinate system (NAD 83)
North Carolina Geodetic Survey bench mark (see explanation in the Datum Information section of this FIRM panel).
National Geodetic Survey bench mark (see explanation in the Datum Information section of this FIRM panel).
River Mile



MAP SCALE 1" = 500' (1 : 6,000)

150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0738J

FIRM

FLOOD INSURANCE RATE MAP

NORTH CAROLINA

PANEL 0738

(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	OID No.	PANEL	SUFFIX
DURHAM, CITY OF	370086	0738	J
DURHAM, COUNTY	370085	0738	J

Effective Date
MAY 2, 2006

Map Number
3720073800J

State of North Carolina
Federal Emergency Management Agency